AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Cancelled)

2. (Currently Amended) A method for identifying a compound which modulates interaction or binding between p21 and cyclin D1, the method including:

(a) bringing into contact a first substance ~~which includes~~ comprising a peptide fragment of 40 amino acids or less of p21~~, or a derivative thereof having at least 70% identity with p21 over a contiguous sequence of at least 5 amino acids~~, the peptide fragment ~~or derivative~~ comprising an amino acid sequence selected from the group consisting of:

~~RERWNFDFVTETPLEGDFAW (peptide 4) (SEQ ID NO:4);~~

KACRRLFGPVDSEQLSRDCD (peptide 2) (SEQ ID NO:2);

~~KxxRRyFzP (wherein x may be any amino acid, y and z may be hydrophobic, and each of the bold residues may be absent or different); (SEQ ID NO:14)~~

KRRQTSMTDFYHSKRRLIFS (peptide 10) (SEQ ID NO:10), wherein the amino acid D may be replaced by any amino acid);

KRRQTSATDFYHSKRRLIFS (SEQ ID NO:28);

TSMTDFYHSKRRLIFSKRKP (peptide 11) (SEQ ID NO:11); and

KRRLIFSK (SEQ ID NO:23), wherein K, R, I or S may be replaced by any amino acid~~; and~~

~~xyLzF (wherein y and z are any amino acid and x is preferably R),~~

with a second substance comprising cyclin D1~~,~~ or a fragment thereof ~~derivative thereof having at least 70% identity with cyclin D1 over a contiguous sequence of at least 20 amino acids~~, and a test compound, under conditions wherein, in the absence of the test compound being an inhibitor of interaction or binding of said first and second substances, said first substance and said second substance interact or bind; and

(b) determining interaction or binding between said first substance and said second substance.

3. (Currently Amended) The method according to claim **[2,]** 44 or 45 wherein the peptide fragment of p21 ~~or derivative~~ comprises the amino acid sequence of peptide 4 (SEQ ID NO: 4).

4. (Currently Amended) The method according to claim 2, 44 or 45 wherein the peptide fragment of p21 ~~or derivative~~ comprises the amino acid sequence ~~KxxRRyFzP (SEQ ID NO:14)~~ of peptide 10 (SEQ ID NO: 10), wherein the amino acid residue has been replaced by any amino acid.

5. (Currently Amended) The method according to claim **[4]** 2 wherein the peptide fragment of p21 ~~or derivative~~ comprises the amino acid sequence of peptide 2 (SEQ ID NO:2).

6. (Currently Amended) The method according to claim 2, 44 or 45 wherein the peptide fragment of p21 ~~or derivative~~ comprises the amino acid sequence ~~xyLzF~~ KRRLIFSK (SEQ ID NO: 23), wherein at least one of the amino acid residue selected from the group consisting of R and I has been replaced by any amino acid.

7. (Currently Amended) The method according to claim **[6]** 2 wherein the peptide fragment of p21 ~~or derivative~~ comprises the amino acid sequence of peptide 10 (SEQ ID NO:10).

8. (Currently Amended) The method according to claim **[6]** 2 wherein the peptide fragment of p21 ~~or derivative~~ comprises the amino acid sequence KRRLIFSK (SEQ ID NO:23).

9. (Currently Amended) The method according to claim **[8]** 2 wherein the peptide fragment of p21 ~~or derivative~~ comprises the amino acid sequence of peptide 11 (SEQ ID NO:11).

10. (Previously Presented) The method according to claim 2, 44 or 45 further comprising testing the ability of the compound to modulate a p21- mediated effect on Cdk4 activity.

11. (Previously Presented) The method according to claim 10 wherein RB phosphorylation is tested.

12. (Previously Presented) The method according to claim 2, 44 or 45 wherein induction of G1 cell-cycle arrest is tested.

13 – 16 (Canceled)

17. (Previously Presented) A method comprising obtaining a compound which modulates the interaction or binding between p21 and cyclin D1 in accordance with claim 2, further comprising formulating the compound into a composition including at least one additional component.

18-43 (Canceled)

44. (Currently Amended) A method for identifying a compound which modulates interaction or binding between p21 and Cdk4, the method including:

(a) bringing into contact a first substance which ~~includes~~ comprises a peptide fragment of 40 amino acids or less of p21~~, or a derivative thereof having at least 70% identity with p21 over a contiguous sequence of at least 5 amino acids~~, the peptide fragment ~~or derivative~~ comprising an amino acid sequence selected from the group consisting of:

RERWNFDFVTETPLEGDFAW (peptide 4) (SEQ ID NO:4);

KACRRLFGPVDSEQLSRDCD (peptide 2) (SEQ ID NO:2);

~~KxxRRyFzP (wherein x may be any amino acid, y and z may be hydrophobic, and each of the bold residues may be absent or different); (SEQ ID NO:14)~~

KRRQTSMTDFYHSKRRLIFS (peptide 10) (SEQ ID NO:10), wherein D may be replaced by any amino acid);

KRRQTSATDFYHSKRRLIFS (SEQ ID NO:28);

TSMTDFYHSKRRLIFSKRKP (peptide 11) (SEQ ID NO:11); and

KRRLIFSK (SEQ ID NO:23), wherein K, R, I or S may be replaced by any amino acid; and

~~xyLzF (wherein y and z are any amino acid and x is preferably R),~~

with a second substance comprising Cdk4 or a fragment thereof, ~~derivative thereof having at least 70% identity with Cdk4 over a contiguous sequence of at least 20 amino acids~~, and a test compound, under conditions wherein, in the absence of the test compound being an inhibitor of interaction or binding of said first and second substances, said first substance and said second substance interact or bind; and

(b) determining interaction or binding between said first substance and said second substance.

45. (Currently Amended) A method for identifying a compound which modulates interaction or binding between p21, cyclin D1 and Cdk4, the method including:

(a) bringing into contact a first substance which ~~includes~~ comprises a peptide fragment of 40 amino acids or less of p21~~, or a derivative thereof having at least 70% identity with p21 over a contiguous sequence of at least 5 amino acids~~, the peptide fragment ~~or derivative~~ comprising an amino acid sequence selected from the group consisting of:

~~RERWNFDFVTETPLEGDFAW (peptide 4) (SEQ ID NO:4);~~

KACRRLFGPVDSEQLSRDCD (peptide 2) (SEQ ID NO:2);

~~KxxRRyFzP (wherein x may be any amino acid, y and z may be hydrophobic, and each of the bold residues may be absent or different); (SEQ ID NO:14)~~

KRRQTSMTDFYHSKRRLIFS (peptide 10) (SEQ ID NO:10), wherein D may be replaced by any amino acid);

KRRQTSATDFYHSKRRLIFS (SEQ ID NO:28);

TSMTDFYHSKRRLIFSKRKP (peptide 11) (SEQ ID NO:11); and

KRRLIFSK (SEQ ID NO:23), wherein K, R, I or S may be replaced by any amino acid; and

~~xyLzF (wherein y and z are any amino acid and x is preferably R),~~

with a second substance comprising cyclin D1 or a fragment thereof ~~derivative thereof having at least 70% identity with cyclin D1 over a contiguous sequence of at least 20 amino acids~~, and Cdk4 or a fragment thereof ~~derivative thereof having at least 70% identity with Cdk4 over contiguous sequence of at least 20 amino acids~~, and a test compound, under conditions wherein, in the absence of the test compound being an inhibitor of interaction or binding of said first and second substances, said first substance and said second substance interact or bind; and

(b) determining interaction or binding between said first substance and said second substance.

46. (Previously Presented) A method comprising obtaining a compound which modulates the interaction or binding between p21 and Cdk4 in accordance with claim 44, further comprising formulating the compound into a composition including at least one additional component.

47. (Previously Presented) A method comprising obtaining a compound which modulates the interaction or binding between p21, cyclin D1 and Cdk4 in accordance with claim 45, further comprising formulating the compound into a composition including at least one additional component.

48-50 (Canceled)

51. (Currently Amended) The method of claim 2, 44 or 45 wherein the peptide fragment ~~or derivative is~~ of p21 is about 40 amino acids or less.

52. (Currently Amended) The method of claim 2, 44 or 45 the peptide fragment ~~or derivative is~~ of p21 is about 35 amino acids or less.

53. (Currently Amended) The method of claim 2, 44 or 45 wherein the peptide fragment ~~or derivative is~~ of p21 is about 30 amino acids or less.

54. (Currently Amended)The method of claim 2, 44 or 45 wherein the peptide fragment ~~or derivative is~~ of p21 is about 25 amino acids or less.

55. (Currently Amended) The method of claim 2, 44 or 45 wherein the peptide fragment ~~or derivative is~~ of p21 is about 20 amino acids or less.

56. (Currently Amended) The method of claim 2, 44 or 45 wherein the peptide fragment ~~or derivative is~~ of p21 is about 10 amino acids or less.

57. (Currently Amended) A method for identifying a compound which modulates interaction or binding between p21 and cyclin D1, the method including:

(a) bringing into contact a peptide fragment of 40 amino acids or less of p21, ~~or a derivative thereof having at least 70% identity with p21 over a contiguous sequence of at least 5 amino acids,~~ the peptide fragment ~~or derivative~~ comprising an amino acid sequence selected from the group consisting of:

~~RERWNFDFVTETPLEGDFAW (peptide 4) (SEQ ID NO:4);~~

KACRRLFGPVDSEQLSRDCD (peptide 2) (SEQ ID NO:2);

~~KxxRRyFzP (wherein x may be any amino acid, y and z may be hydrophobic, and each of the bold residues may be absent or different); (SEQ ID NO:14)~~

KRRQTSMTDFYHSKRRLIFS (peptide 10) (SEQ ID NO:10), wherein D may be replaced by any amino acid);

KRRQTSATDFYHSKRRLIFS (SEQ ID NO:28);

TSMTDFYHSKRRLIFSKRKP (peptide 11) (SEQ ID NO:11); and

KRRLIFSK (SEQ ID NO:23), wherein K, R, I or S may be replaced by any amino acid; ~~and~~

~~xyLzF (wherein y and z are any amino acid and x is preferably R),~~

with cyclin D1 and a test compound under conditions wherein in the absence of the test compound said peptide fragment ~~or derivative~~ and cyclin D1 interact or bind; and

(b) determining interaction or binding between said peptide fragment or derivative and cyclin D1 in the presence of said test compound.

58. (Currently Amended) A method for identifying a compound which modulates interaction or binding between p21 and Cdk4, the method including:

(a) bringing into contact a peptide fragment of 40 amino acids or less of p21~~, or a derivative thereof having at least 70% identity with p21 over a contiguous sequence of at least 5 amino acids~~, the peptide fragment ~~or derivative~~ comprising an amino acid sequence selected from the group consisting of:

~~RERWNFDFVTETPLEGDFAW (peptide 4) (SEQ ID NO:4);~~

KACRRLFGPVDSEQLSRDCD (peptide 2) (SEQ ID NO:2);

~~KxxRRyFzP (wherein x may be any amino acid, y and z may be hydrophobic, and each of the bold residues may be absent or different); (SEQ ID NO:14)~~

KRRQTSMTDFYHSKRRLIFS (peptide 10) (SEQ ID NO:10), wherein D may be replaced by any amino acid);

KRRQTSATDFYHSKRRLIFS (SEQ ID NO:28);

TSMTDFYHSKRRLIFSKRKP (peptide 11) (SEQ ID NO:11); and

KRRLIFSK (SEQ ID NO:23), wherein K, R, I or S may be replaced by any amino acid~~;~~ ~~and~~

~~xyLzF (wherein y and z are any amino acid and x is preferably R)~~,

with Cdk4 and a test compound under conditions wherein in the absence of the test compound said fragment ~~or derivative~~ and Cdk4 interact or bind; and

(b) determining interaction or binding between said peptide fragment or derivative and Cdk4 in the presence of said test compound.

59. (Currently Amended) A method for identifying a compound which modulates interaction or binding between p21, cyclin D1 and Cdk4, the method including:

(a) bringing into contact a peptide fragment of 40 amino acids or less of p21~~, or a derivative thereof having at least 70% identity with p21 over a contiguous sequence of at least 5 amino acids~~, the peptide fragment ~~or derivative~~ comprising an amino acid sequence selected from the group consisting of:

~~RERWNFDFVTETPLEGDFAW (peptide 4) (SEQ ID NO:4);~~

KACRRLFGPVDSEQLSRDCD (peptide 2) (SEQ ID NO:2);

~~KxxRRyFzP (wherein x may be any amino acid, y and z may be hydrophobic, and each of the bold residues may be absent or different); (SEQ ID NO:14)~~

KRRQTSMTDFYHSKRRLIFS (peptide 10) (SEQ ID NO:10), wherein D may be replaced by any amino acid);

KRRQTSATDFYHSKRRLIFS (SEQ ID NO:28);

TSMTDFYHSKRRLIFSKRKP (peptide 11) (SEQ ID NO:11); and

KRRLIFSK (SEQ ID NO:23), wherein K, R, I or S may be replaced by any amino acid; ~~and~~

~~xyLzF (wherein y and z are any amino acid and x is preferably R),~~

with a cyclin D1, Cdk4 and a test compound under conditions wherein in the absence of the test compound said peptide fragment ~~or derivative~~, cyclin D1 and Cdk4 interact or bind; and

(b) determining interaction or binding between said peptide fragment or derivative, cyclin D1 and Cdk4 in the presence of the test compound.